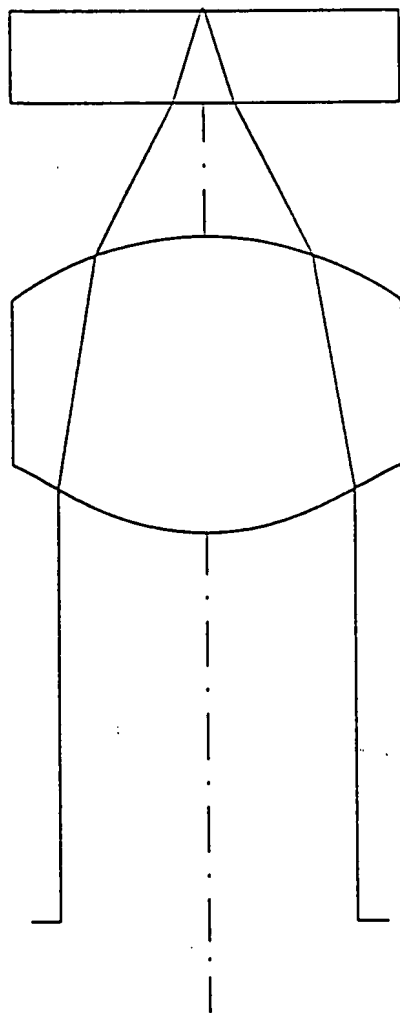


FIG. 1



PRIOR ART EXAMPLE

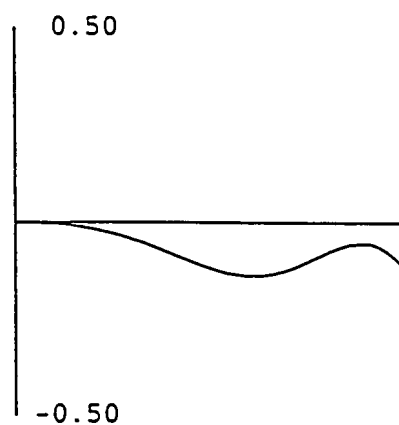
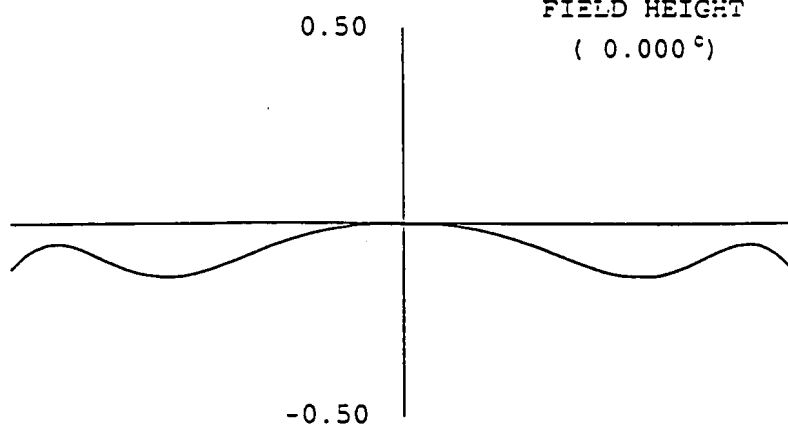
FIGURE 1

0.140 WAVE P-V
0.035 WAVE RMS

TANGENTIAL

0.00 RELATIVE
FIELD HEIGHT
(0.000 °)

SAGITTAL



0.140 WAVE P-V

0.035 WAVE RMS

FIGURE 2 (PRIOR ART)

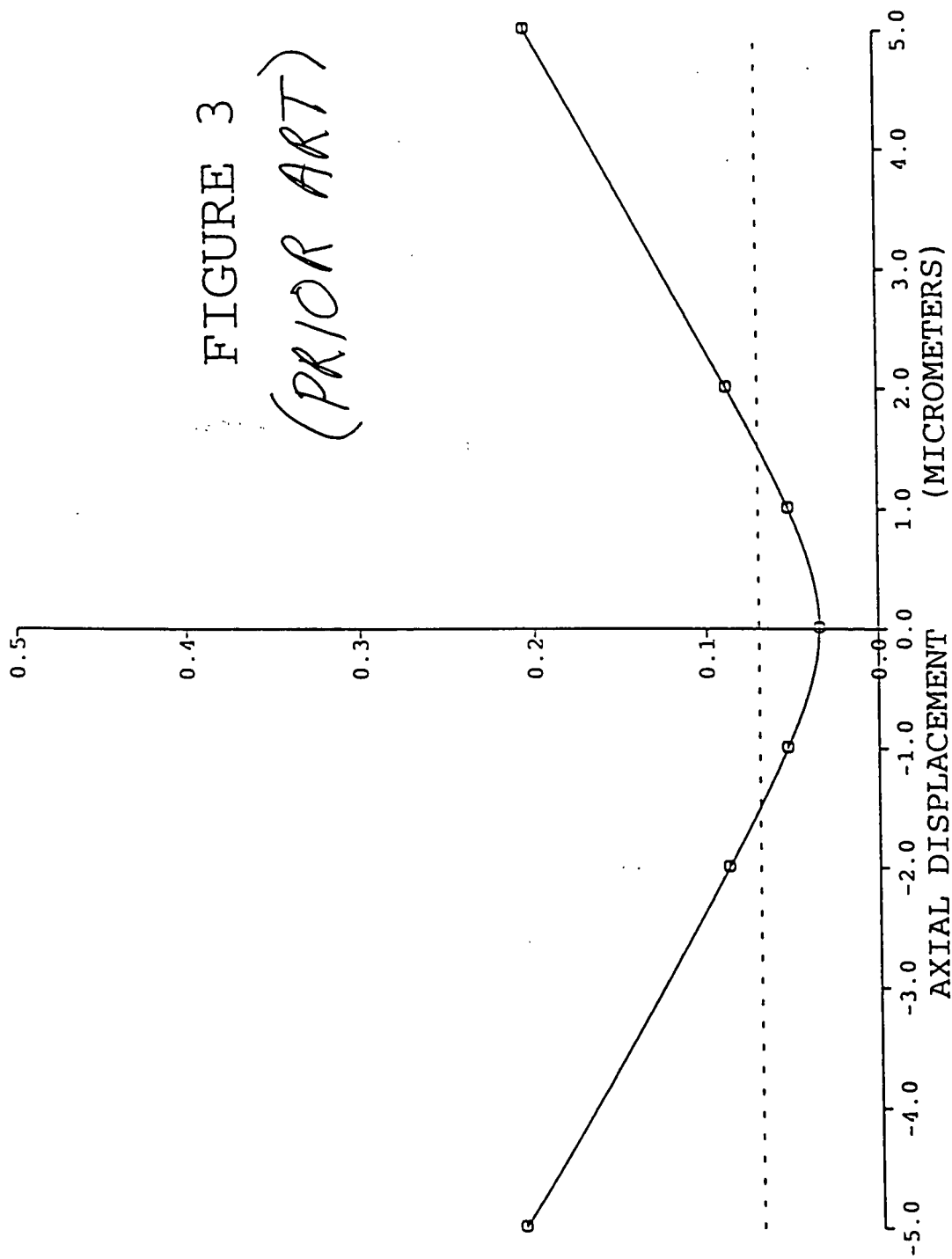
PRIOR ART

DEPTH OF FOCUS

0.45NA AND 780NM

MARECHAL DIFFRACTION LIM

RMS WAVEFRONT ERROR



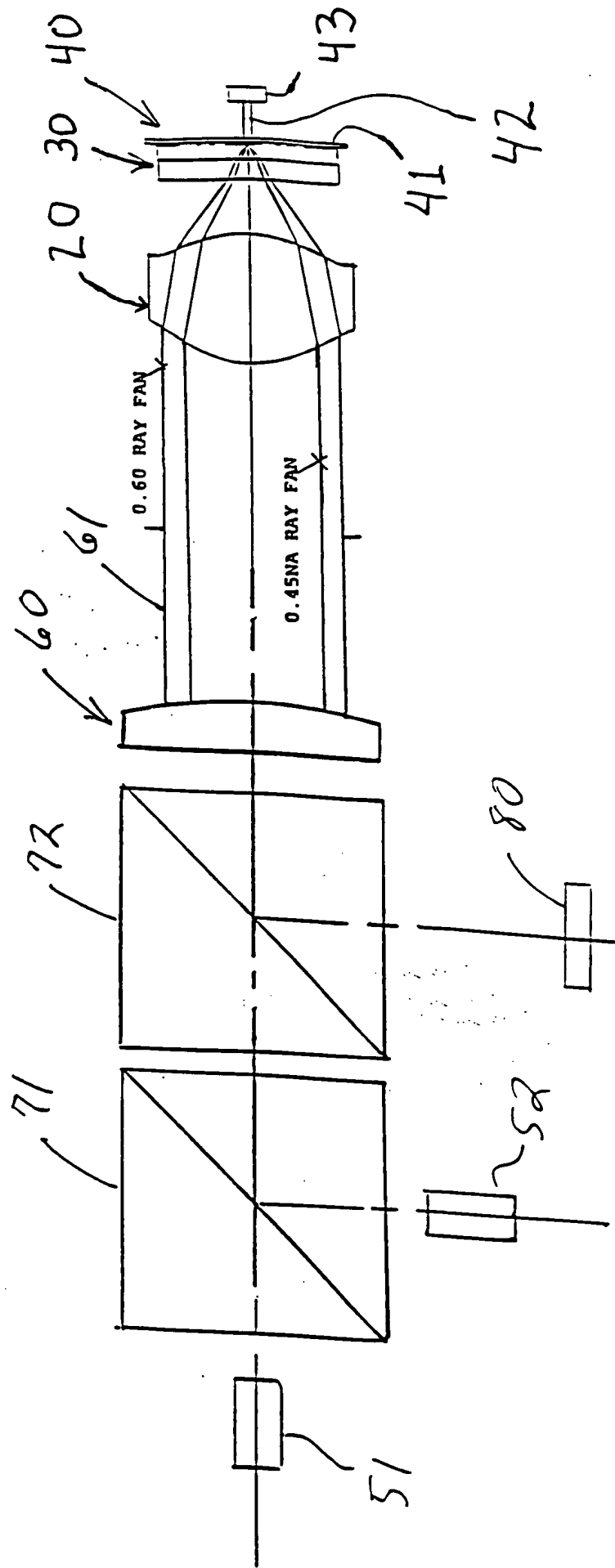


FIG 4

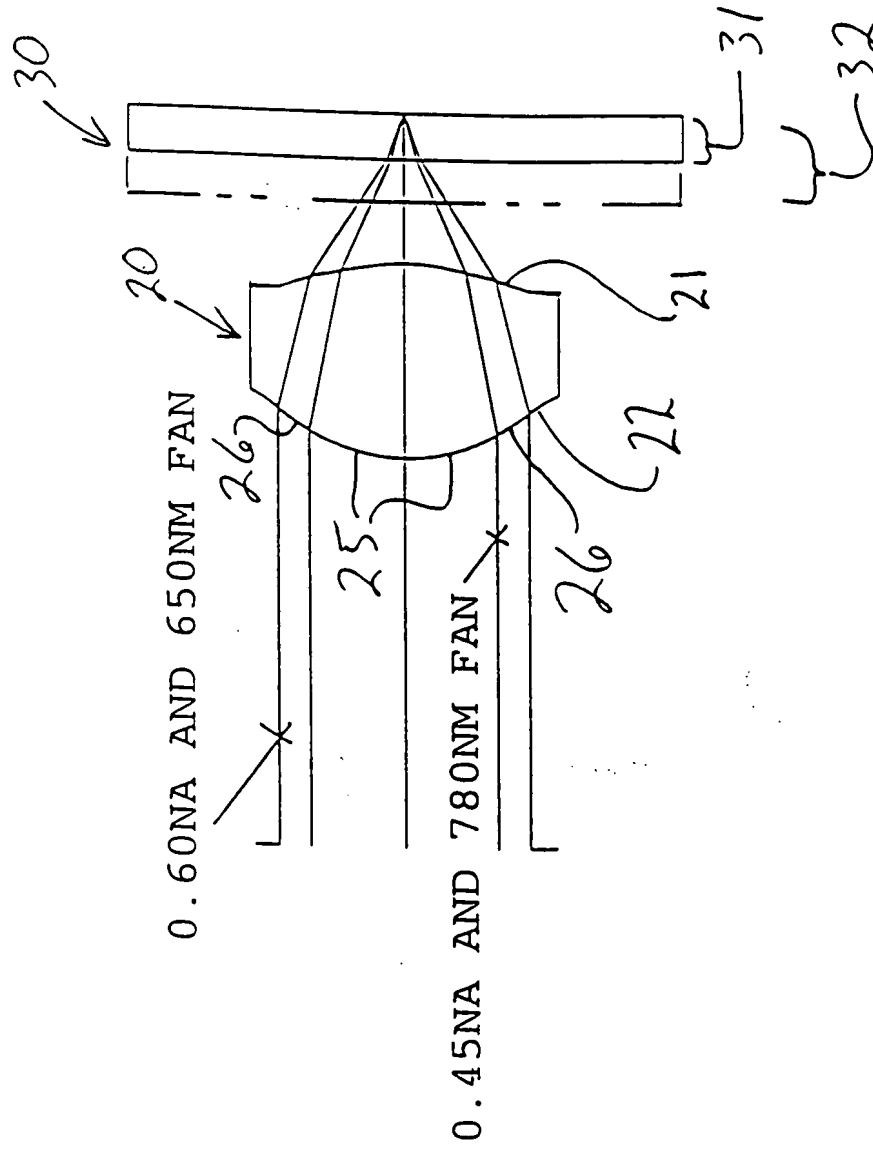


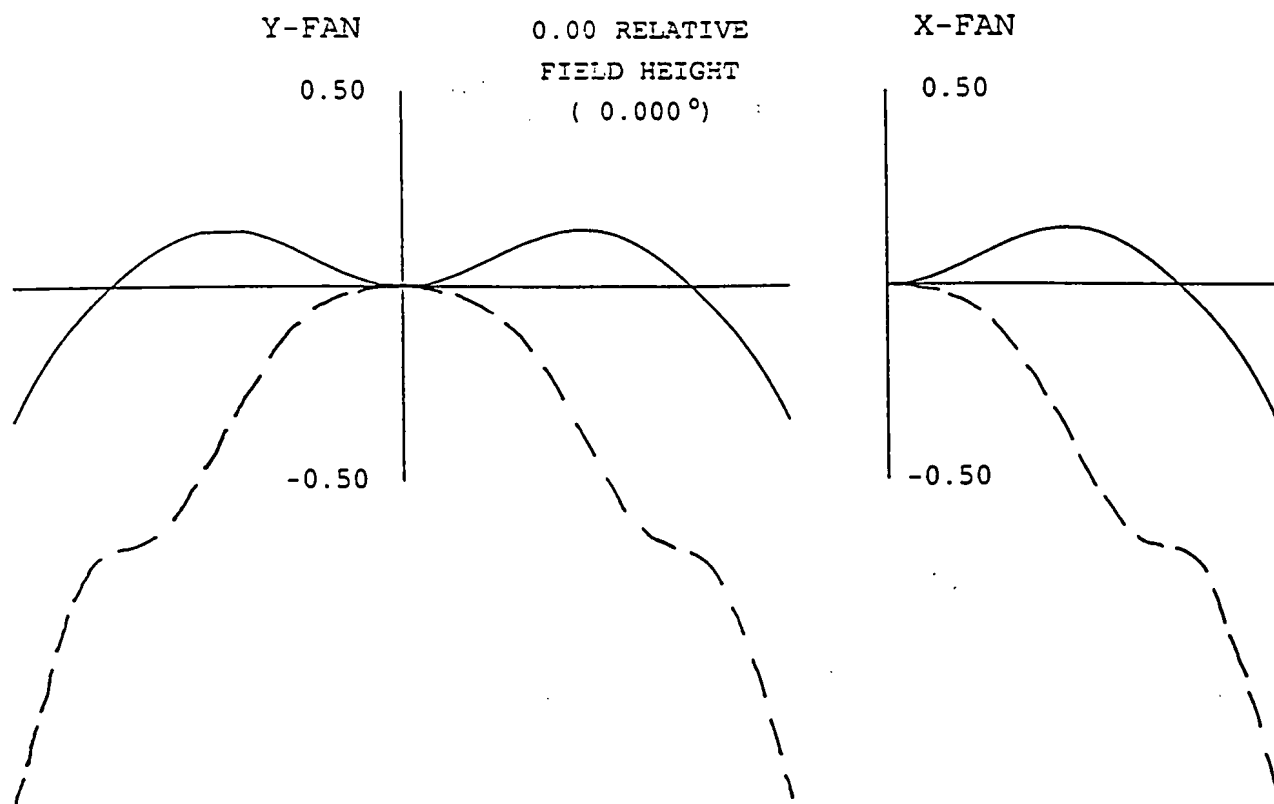
FIGURE 5

2.50 MM

Position: 2
 Scale: 10.00

CD/DVD FOCUS LENS

FIGURE 6



CD/DVD FOCUS LENS

OPTICAL PATH DIFFERENCE (WAVES)

POSITION 1

----- 650.0 NM
 _____ 780.0 NM

BI-ASPHERE

DEPTH OF FOCUS

0.45NA AND 780NM

0.60NA AND 650NM

MARECHAL DIFFRACTION LIM

FIGURE 7

RMS WAVEFRONT ERROR

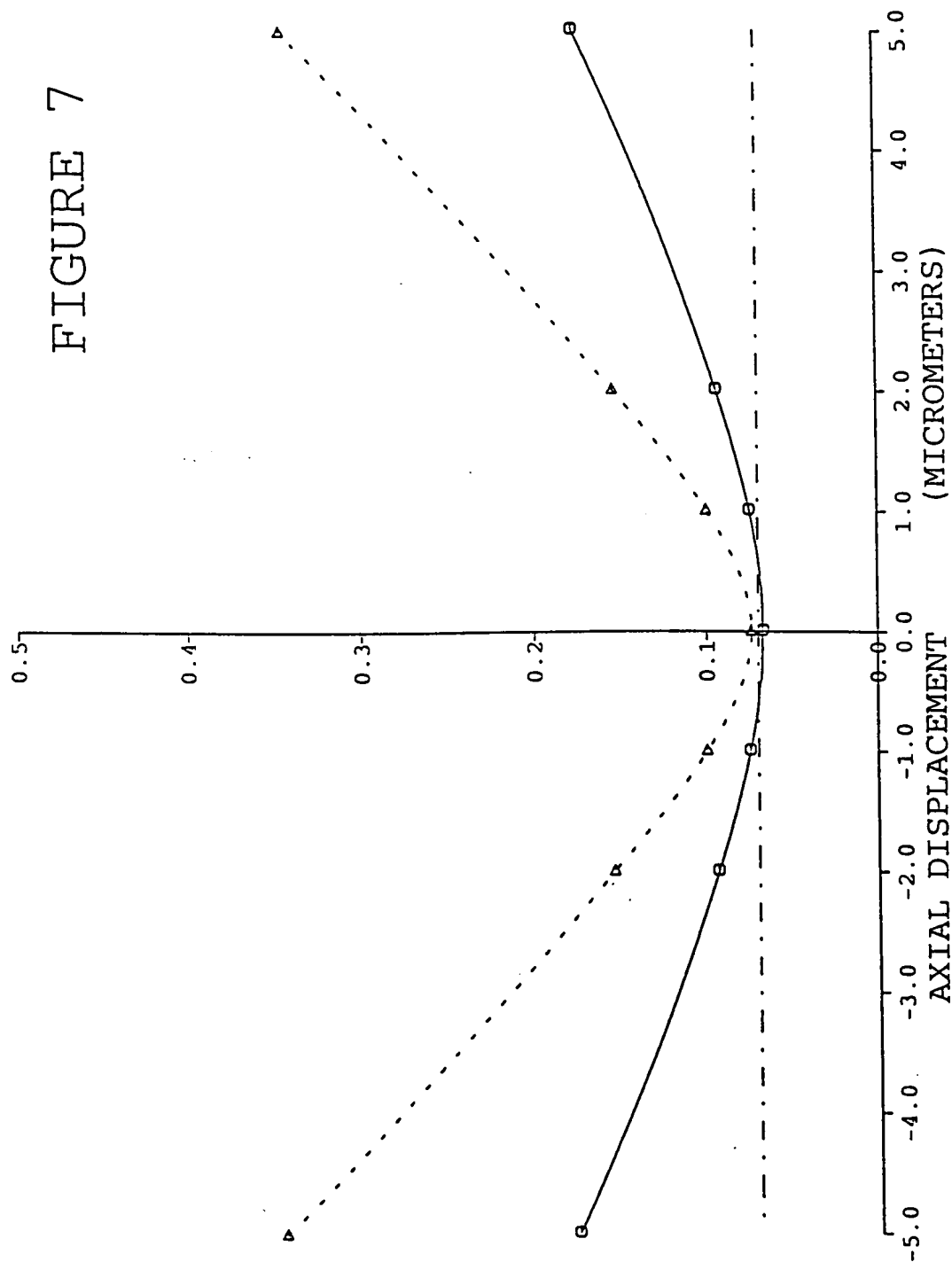
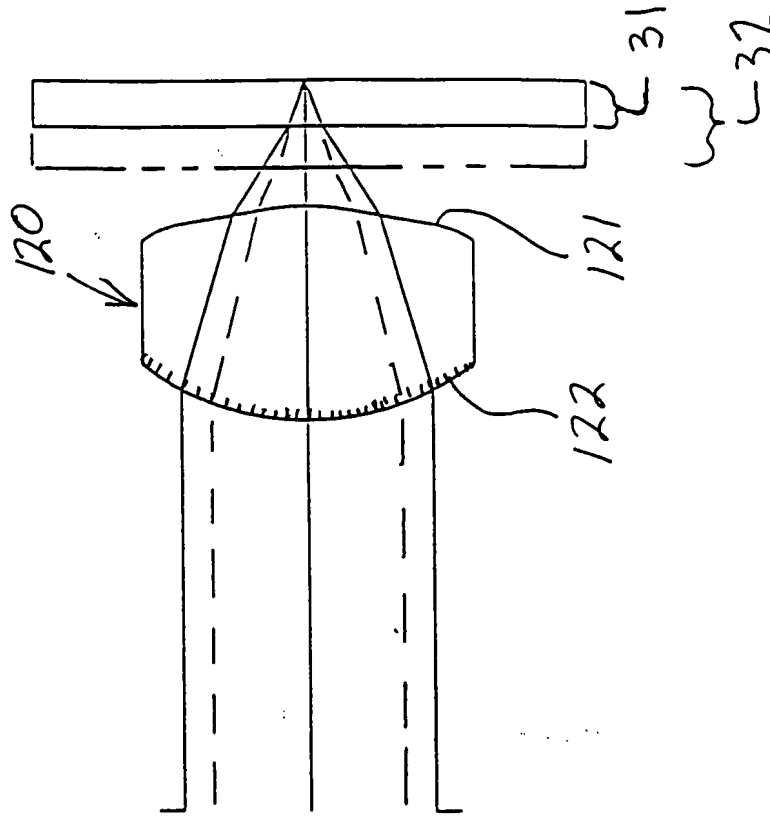


FIGURE 8



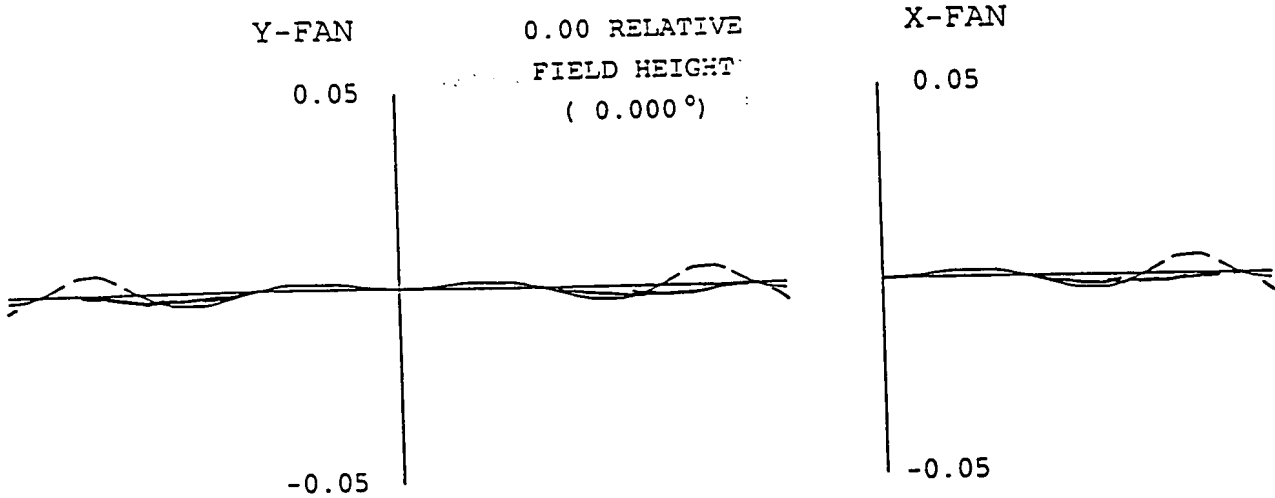
2.50 MM

Position: 2

Scale: 10.00

CD/DVD FOCUS LENS

FIGURE 9



CD/DVD FOCUS LENS

OPTICAL PATH DIFFERENCE (WAVES)

POSITION 2

----- 650.0 NM
 _____ 780.0 NM

DIFRACTIVE LENS

DEPTH OF FOCUS

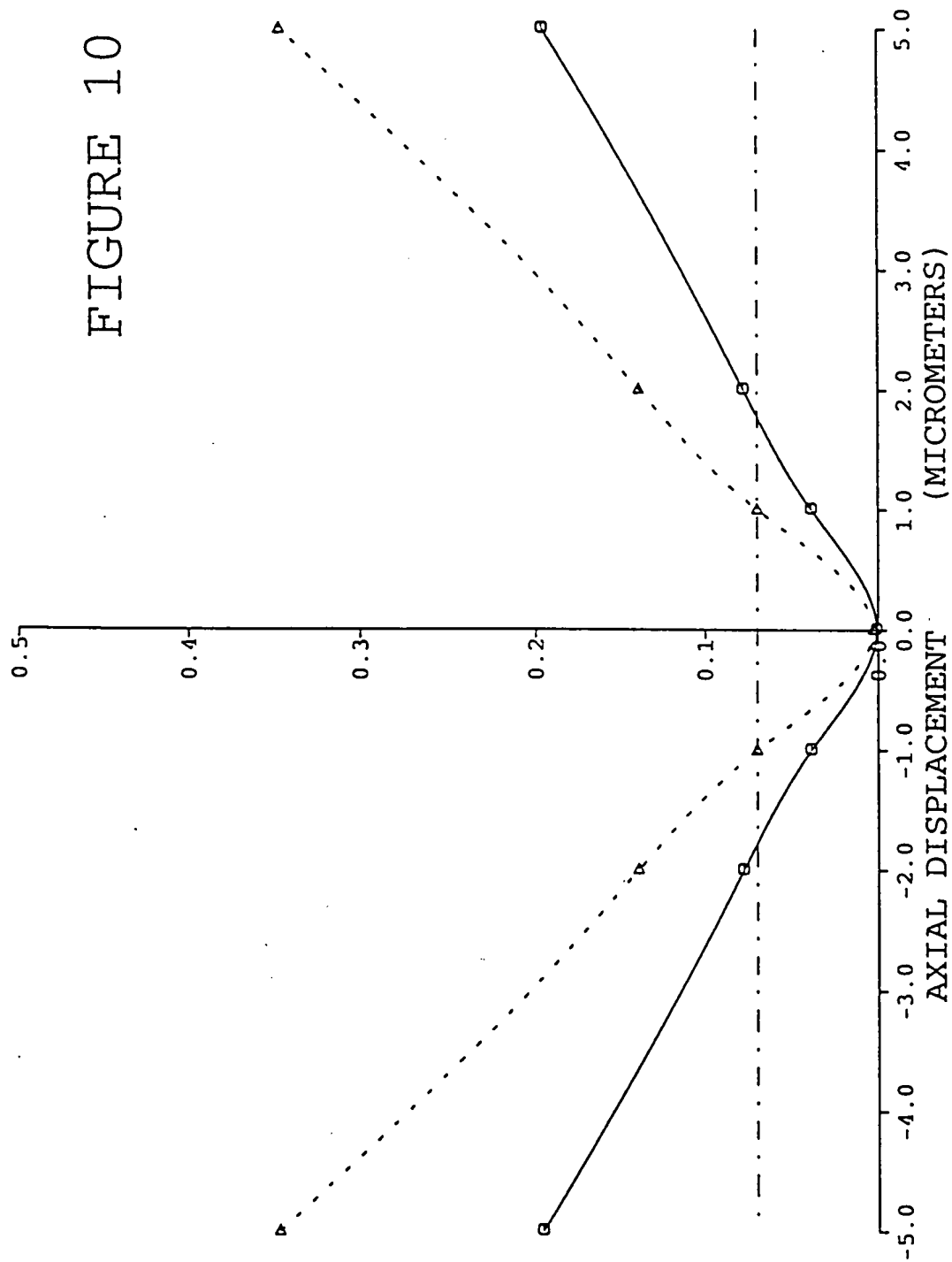
0.45NA AND 780NM

0.60NA AND 650NM

MARECHAL DIFFRACTION LIM

FIGURE 10

RMS WAVEFRONT ERROR



0.00 0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.10 0.11 0.12 0.13 0.14 0.15 0.16 0.17 0.18 0.19 0.20 0.21 0.22 0.23 0.24 0.25 0.26 0.27 0.28 0.29 0.30 0.31 0.32 0.33 0.34 0.35 0.36 0.37 0.38 0.39 0.40 0.41 0.42 0.43 0.44 0.45 0.46 0.47 0.48 0.49 0.50 0.51 0.52 0.53 0.54 0.55 0.56 0.57 0.58 0.59 0.60 0.61 0.62 0.63 0.64 0.65 0.66 0.67 0.68 0.69 0.70 0.71 0.72 0.73 0.74 0.75 0.76 0.77 0.78 0.79 0.80 0.81 0.82 0.83 0.84 0.85 0.86 0.87 0.88 0.89 0.90 0.91 0.92 0.93 0.94 0.95 0.96 0.97 0.98 0.99 1.00

DIFFRACTIVE LENS
DIFFRACTION EFFIC

DIFFRACTION EFFIC

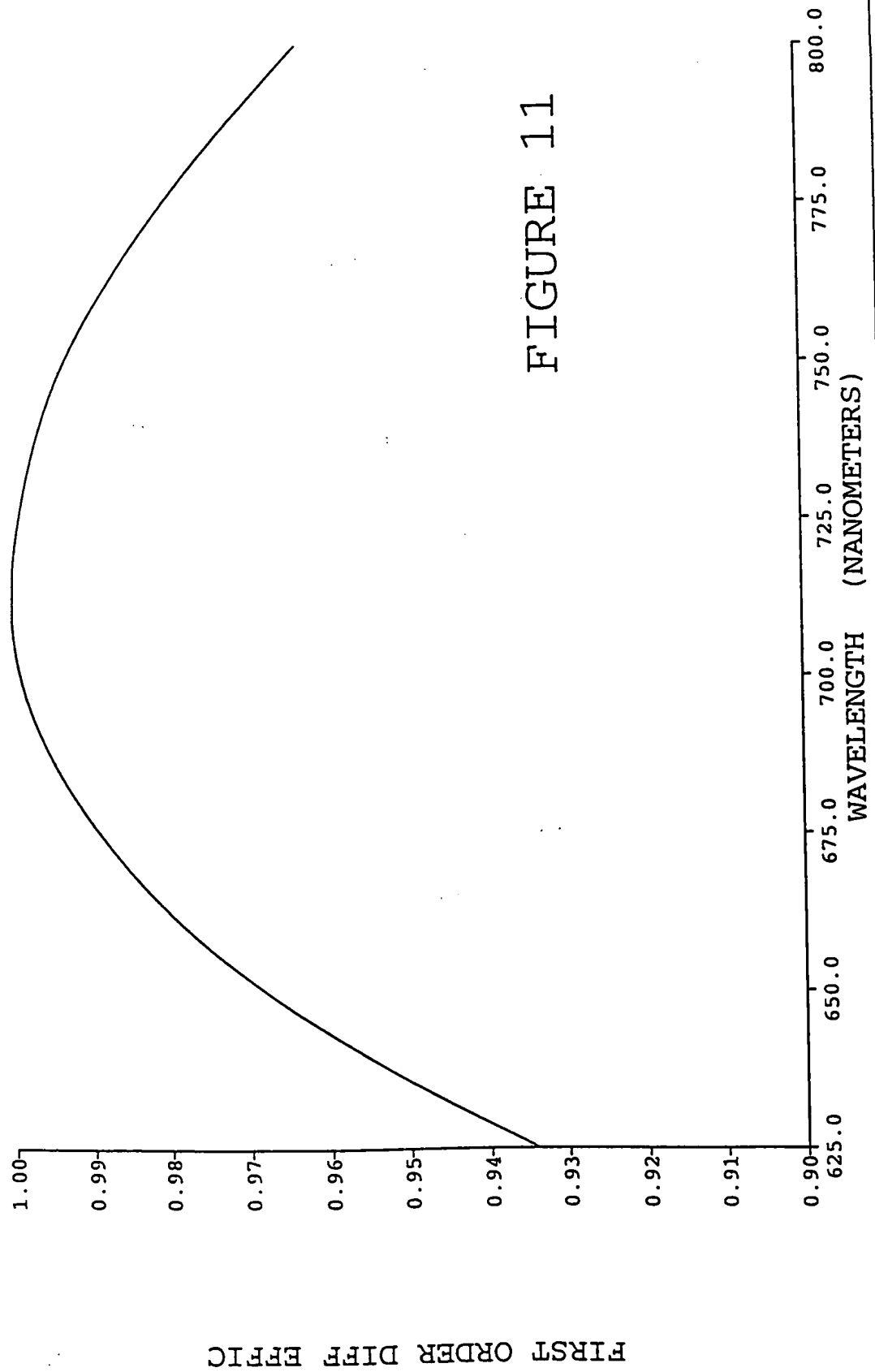
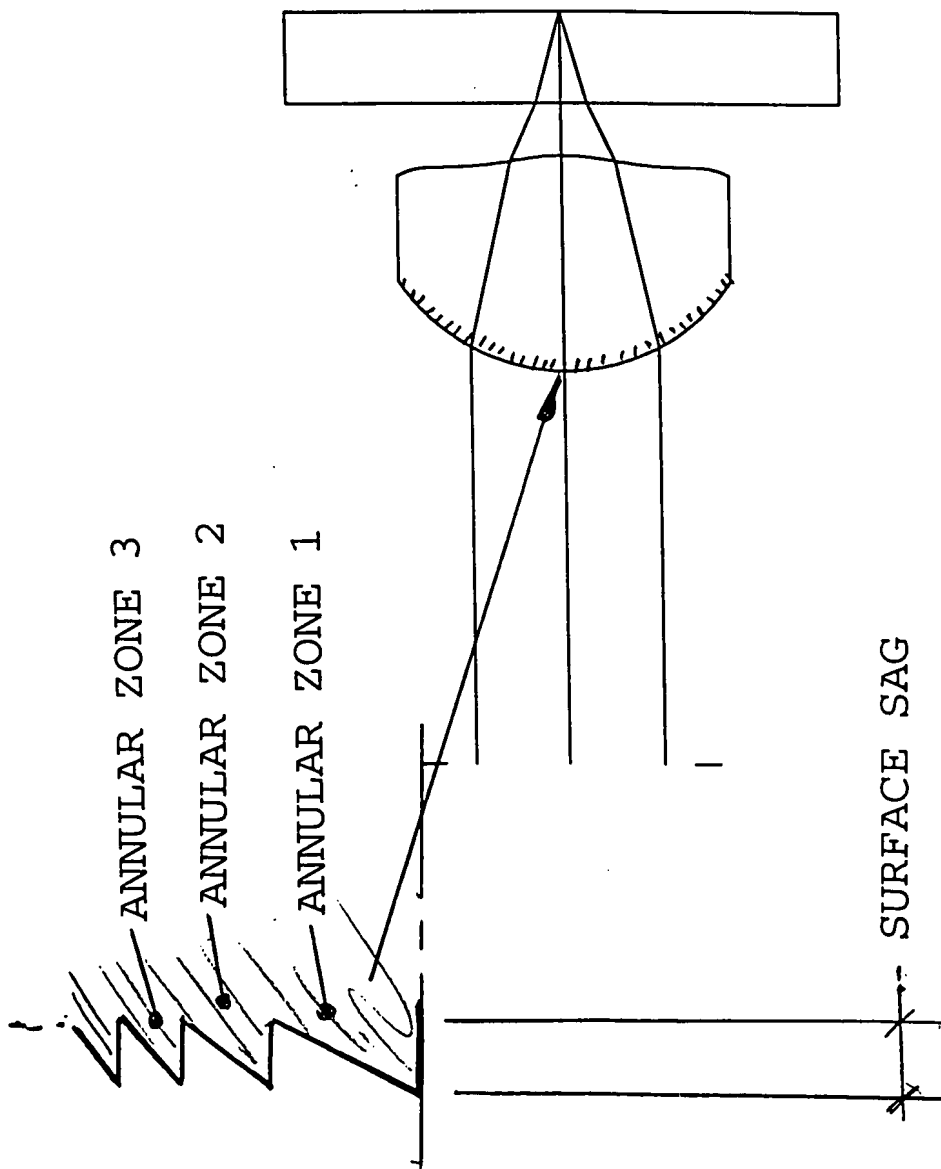


FIGURE 11



2.50 MM

Position: 1
Scale: 10.00

CD/DVD FOCUS LENS

FIGURE 12